AMENDMENTS

Please amend the application as indicated hereafter.

In the Claims

Please amend the claims as indicated below. The language being added is underlined ("___") and the language being deleted contains strikethrough ("——"):

1. – 5. (Canceled)

6. (Currently Amended) A method for manipulating a graphical display of a printed circuit board model, the printed circuit board model adapted to be used in an automated x-ray inspection system for detecting defects in a manufactured printed circuit board having one or more components comprising one or more pins soldered to the printed circuit board, the method comprising the steps of:

providing a graphical user interface comprising a first portion for providing a graphical display of a printed circuit board model comprising a plurality of image objects associated with a printed circuit board;

receiving a user selection of a first image object in the first portion of the graphical user interface;

displaying a target area containing the first image object selected, the target area corresponding to a portion of the printed circuit board to be imaged by the x-ray imaging system;

receiving a user selection of a second image object in the first portion of the graphical user interface; and

modifying the displayed target area such that the target area is automatically manipulated to contain contains the first and second image objects.

7.   (Original) The method of claim 6, wherein the step of modifying the displayed target area comprises centering the target area with respect to the first and second image objects selected.

8.   (Original) The method of claim 6, wherein the step of modifying the displayed target area comprises displaying the target area such that the first and second image objects are contained within the target area and a maximum number of the image objects not selected are contained in the target area.

9.   (Original) The method of claim 6, wherein at least one of the plurality of image objects comprises a family object that specifies a type of solder joint.

10.   (Original) The method of claim 6, wherein at least one of the plurality of image objects comprises a package object that specifies a type of component.

11.   (Original) The method of claim 6, wherein at least one of the plurality of image objects comprises a pin object that specifies a unique pin number for a specific component in the printed circuit board.

12.   (Original) The method of claim 6, wherein the target area comprises a square.

13.   (Original) The method of claim 6, wherein the step of receiving a user selection of a first image object and the step of receiving a user selection of a second image object is via a cursor manipulated by a mouse.

14. – 18.   (Canceled)

19.   (Currently Amended) A computer program embodied in a computer-readable medium for manipulating a graphical display of a printed circuit board model, the printed circuit board model adapted to be used in an automated x-ray inspection system for detecting defects in a manufactured printed circuit board having one or more components comprising one or more pins soldered to the printed circuit board, the computer program comprising logic configured to:

provide a graphical user interface comprising a first portion for providing a graphical display of a printed circuit board model comprising a plurality of image objects associated with a printed circuit board;

receive a user selection of a first image object in the first portion of the graphical user interface;

display a target area containing the first image object selected, the target area corresponding to a portion of the printed circuit board to be imaged by the x-ray imaging system;

receive a user selection of a second image object in the first portion of the graphical user interface; and

modify the displayed target area such that the target area is automatically manipulated to contain contains the first and second image objects.

20.   (Original) The computer program of claim 19, wherein the logic is further configured to modify the displayed target area by centering the target area with respect to the first and second image objects selected.

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21.   (Original) The computer program of claim 19, wherein the logic is further configured to modify the displayed target area by displaying the target area such that the first and second image objects are contained within the target area and a maximum number of the image objects not selected are contained in the target area.

22.   (Original) The computer program of claim 19, wherein at least one of the plurality of image objects corresponds to a solder joint.

23.   (Original) The computer program of claim 19, wherein at least one of the plurality of image objects corresponds to a component.

24.   (Original) The computer program of claim 19, wherein at least one of the plurality of image objects corresponds to a pin.

25.   (Original) The computer program of claim 20, wherein the target area comprises a square.

26.   (Currently Amended) The computer program of claim 19, wherein the logic is further configured to receive the user selection of a first image object a second image via a cursor manipulated by a mouse.

27.   (Currently Amended) A system for manipulating a graphical display of a printed circuit board model, the printed circuit board model adapted to be used in an automated x-ray inspection system for detecting defects in a manufactured printed

circuit board having one or more components comprising one or more pins soldered to the printed circuit board, the system comprising:

a means for providing a graphical user interface comprising a first portion for providing a graphical display of a printed circuit board model comprising a plurality of image objects associated with a printed circuit board;

a means for receiving a user selection of one or more of the image objects in the first portion of the graphical user interface; and

a means for displaying a target area such that the target area is automatically manipulated to contain contains one or more image objects selected and a maximum number of the image objects not selected are contained in the target area;

wherein the target area corresponds to a portion of the printed circuit board to be imaged by the x-ray inspection system.

28.   (Currently Amended) A system for manipulating a graphical display of a printed circuit board model, the printed circuit board model adapted to be used in an automated x-ray inspection system for detecting defects in a manufactured printed circuit board having one or more components comprising one or more pins soldered to the printed circuit board, the system comprising:

logic configured to:

provide a graphical user interface comprising a first portion for providing a graphical display of a printed circuit board model comprising a plurality of image objects associated with a printed circuit board;

receive a user selection of a first image object in the first portion of the graphical user interface;

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display a target area containing the first image object selected, the target area corresponding to a portion of the printed circuit board to be imaged by the x-ray imaging system;

receive a user selection of a second image object in the first portion of the graphical user interface; and

modify the displayed target area such that the target area is automatically manipulated to contain contains the first and second image objects;

a processing device configured to implement the logic; and

a display device configured to support the graphical user interface.

29.   (Original) The system of claim 28, wherein the logic is further configured to modify the displayed target area by centering the target area with respect to the first and second image objects selected.

30.   (Original) The system of claim 28, wherein the logic is further configured to modify the displayed target area by displaying the target area such that the first and second image objects are contained within the target area and a maximum number of the image objects not selected are contained in the target area.

31.   (Original) The system of claim 28, wherein at least one of the plurality of image objects corresponds to a solder joint.

32.   (Original) The system of claim 28, wherein at least one of the plurality of image objects corresponds to a component.

33.   (Original) The system of claim 28, wherein at least one of the plurality of image objects corresponds to a pin.

34.   (Original) The system of claim 29, wherein the target area comprises a square.

35.   (Currently Amended) The system of claim 28, wherein the logic is further configured to receive the user selection of a first image object ~~a second image~~ via a cursor manipulated by a mouse.

36.   (New) The system of claim 27, further comprising:

means for modifying the displayed target area by centering the target area with respect to the first and second image objects selected.

37.   (New) The system of claim 27, further comprising:

means for modifying the displayed target area by displaying the target area such that the first and second image objects are contained within the target area and a maximum number of the image objects not selected are contained in the target area.

38.   (New) The systems of claim 27, wherein at least one of the plurality of image objects corresponds to a solder joint.

39.   (New) The system of claim 27, wherein at least one of the plurality of image objects corresponds to a component.

40.   (New) The system of claim 27, wherein at least one of the plurality of image objects corresponds to a pin.

41.   (New) The system of claim 36, wherein the target area comprises a square.

42.   (New) The system of claim 27, wherein the means for receiving a user selection of one or more other image objects includes receiving the user selection of a first image object via a cursor manipulated by a mouse.